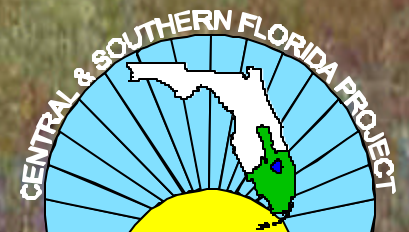


# The Everglades- Restoring an American Treasure



Tom Teets  
South Florida  
Water Management District



COMPREHENSIVE  
EVERGLADES  
RESTORATION PLAN

# ***Agenda***

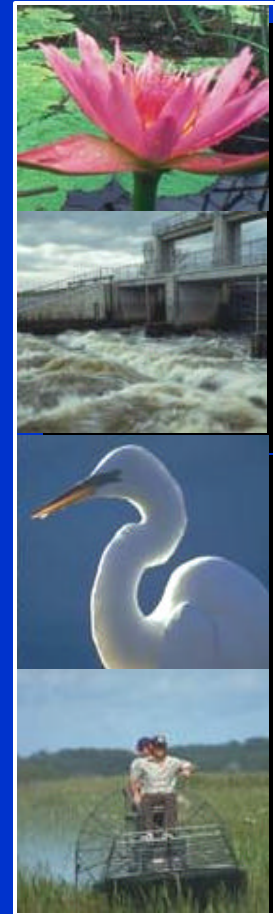
- **SFWMD Overview**
- **Everglades Restoration**
- **Business Opportunities**
- **Implementation**

# South Florida Water Management District



## *Our Mission*

*To manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.*



# South Florida Water Management District



- Created by state legislation in 1949
- 16 counties from Orlando to Key West
- Covers nearly 18,000 square miles



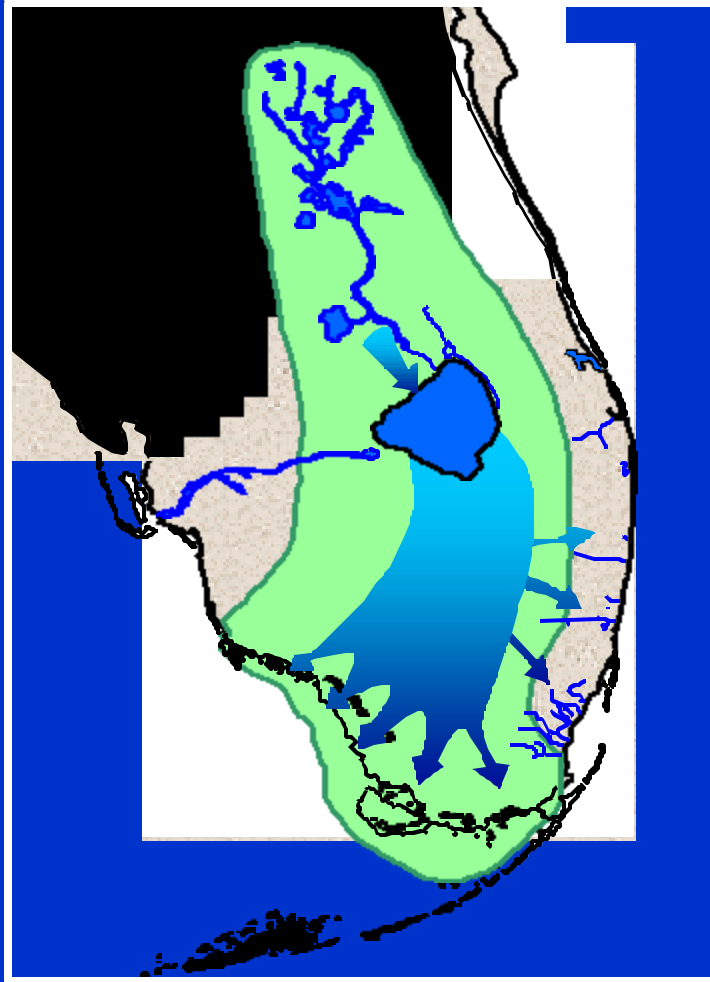
# **South Florida Water Management District**



- **Serves over 6 million residents**
- **Employs 1,775 people**
- **293 major water control structures**
- **Approximately 460,000 acres in public ownership**

# The “Original” Everglades Ecosystem

## “River of Grass”

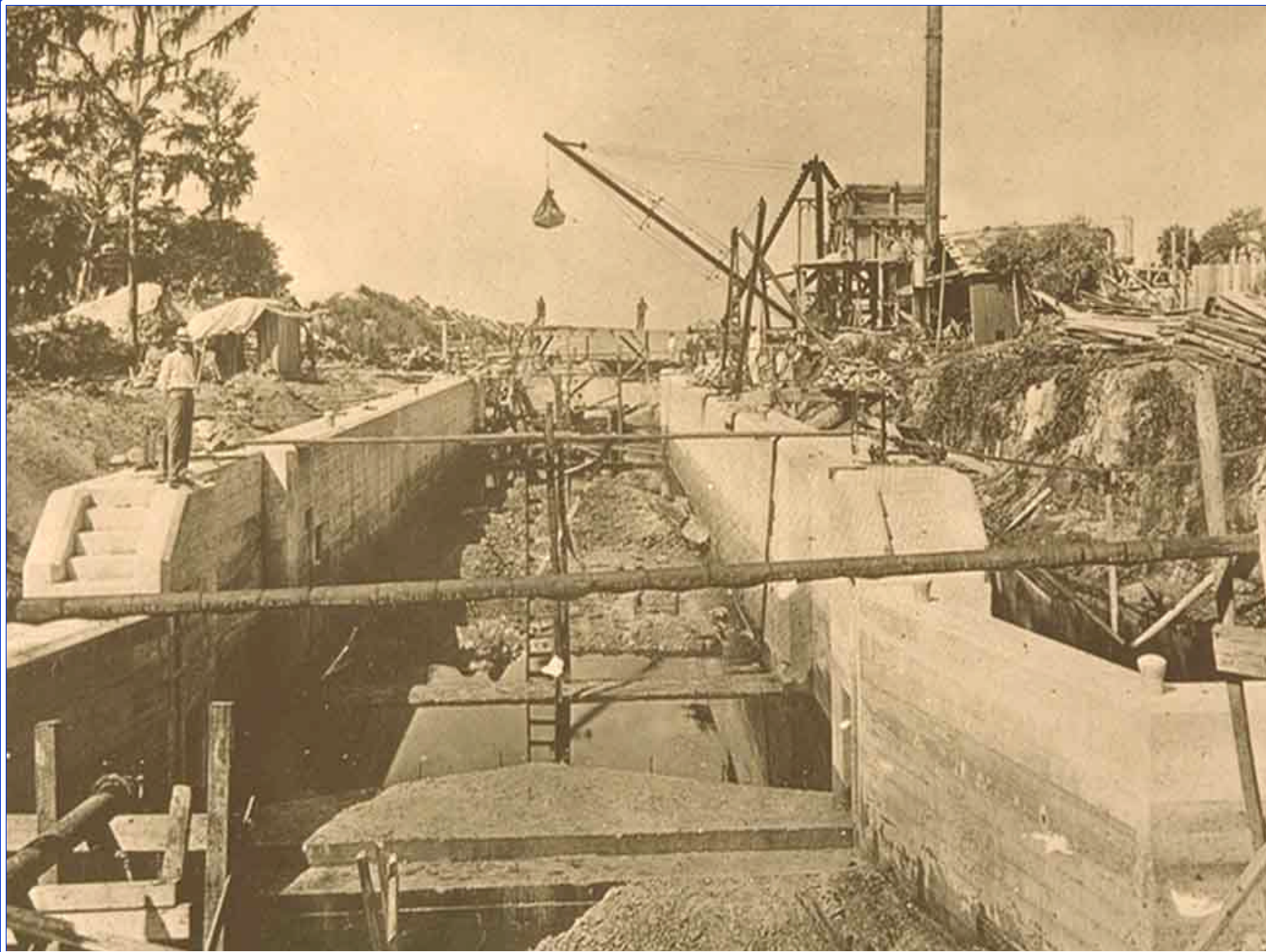


- Water connected the system, from top to bottom
- 9 million acres of wetlands providing a variety of habitat
- Diverse mosaic of landscapes and seascapes





**Early Dredging Activities**

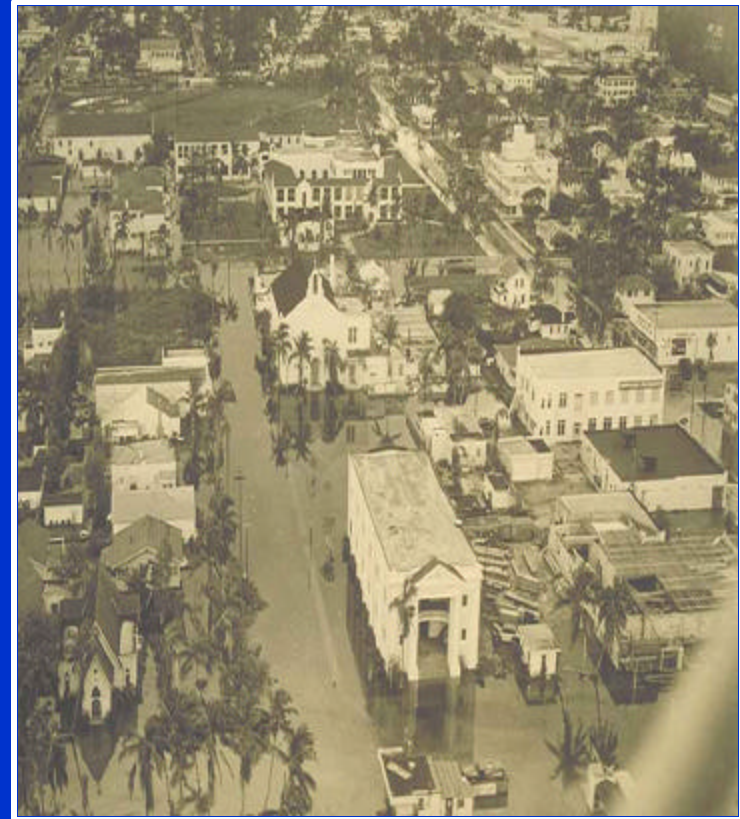


**St. Lucie Lock Construction**

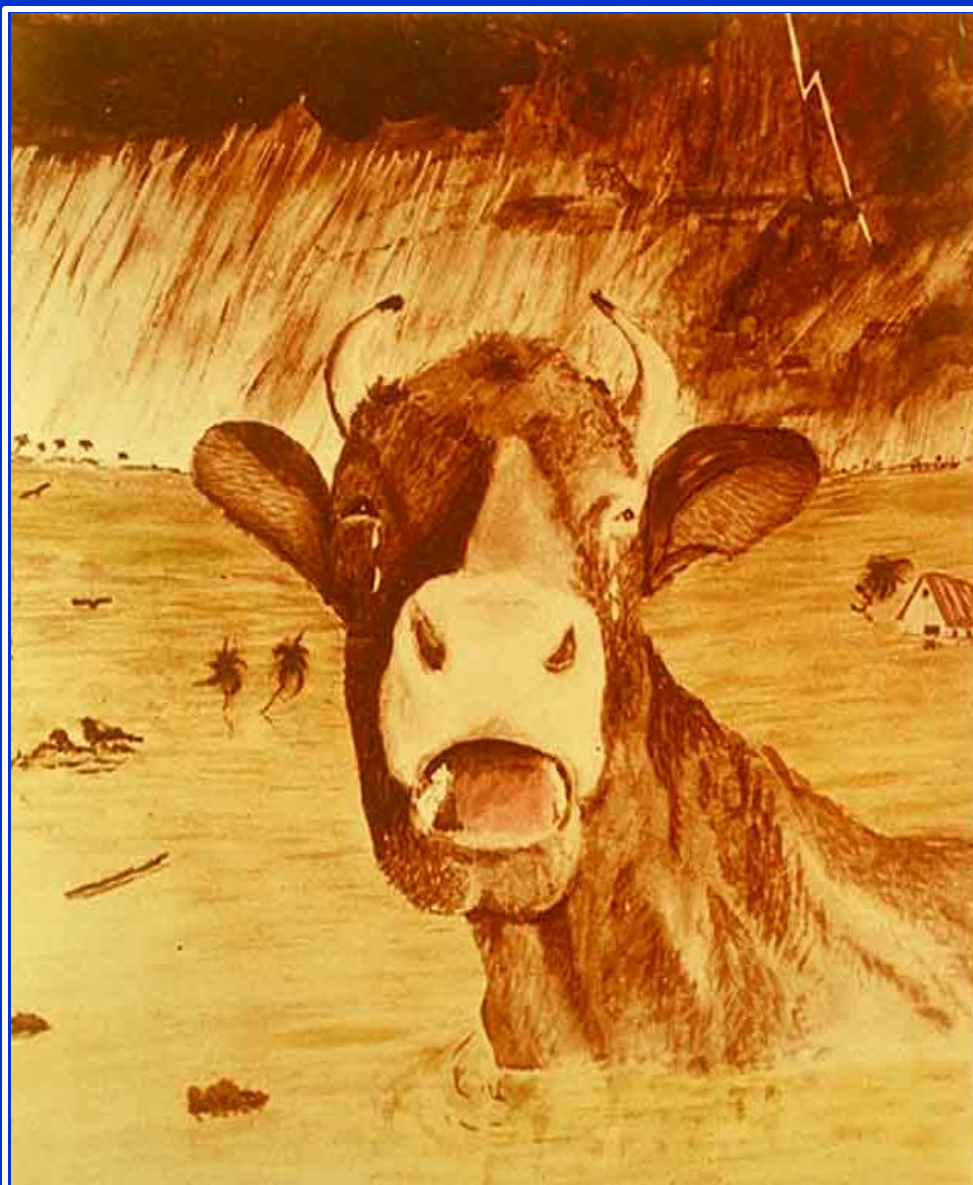




**Kissimmee Flood**



**Ft. Lauderdale Flood**

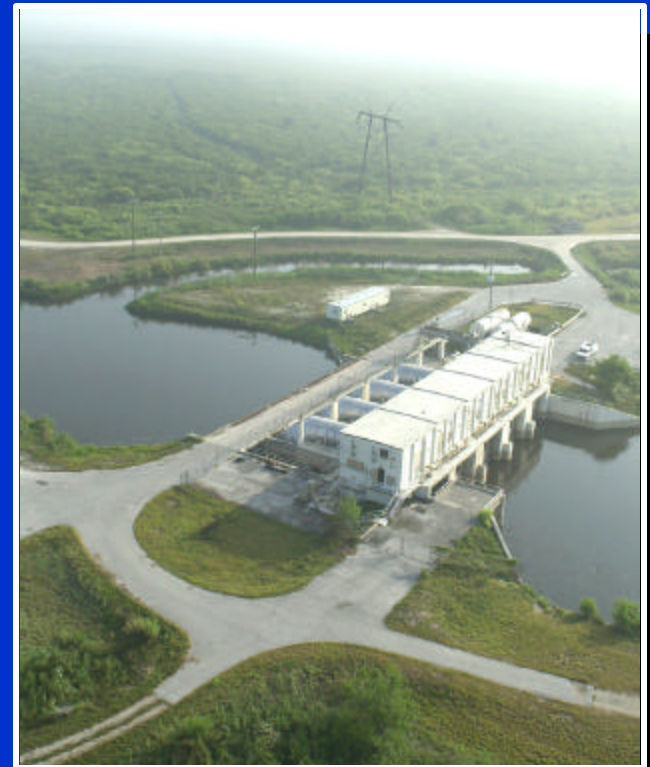


TENTATIVE  
REPORT  
OF  
FLOOD  
DAMAGE  
FLORIDA  
EVERGLADES  
DRAINAGE  
DISTRICT

1947

# The Central and Southern Flood Control Project

- **1948**  
The U.S. Congress authorizes project
- **1949**  
Construction begins
- Continues over 20 years
- 1,800 miles of canals and levees
- 150 water control structures includes 16 major pump stations







**Herbert Hoover Dike Construction**

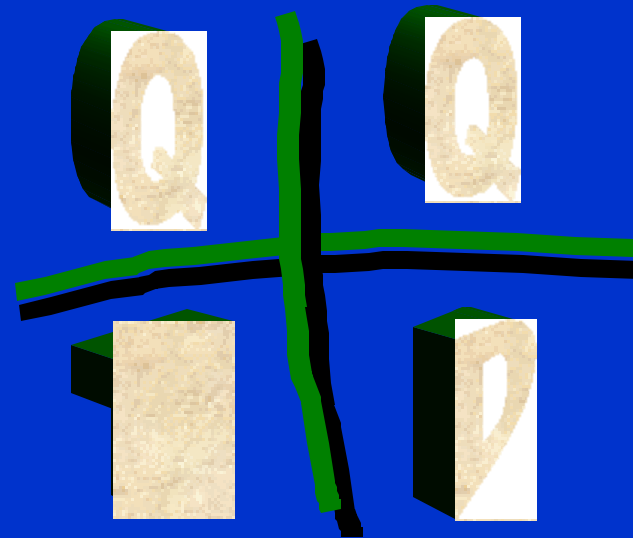
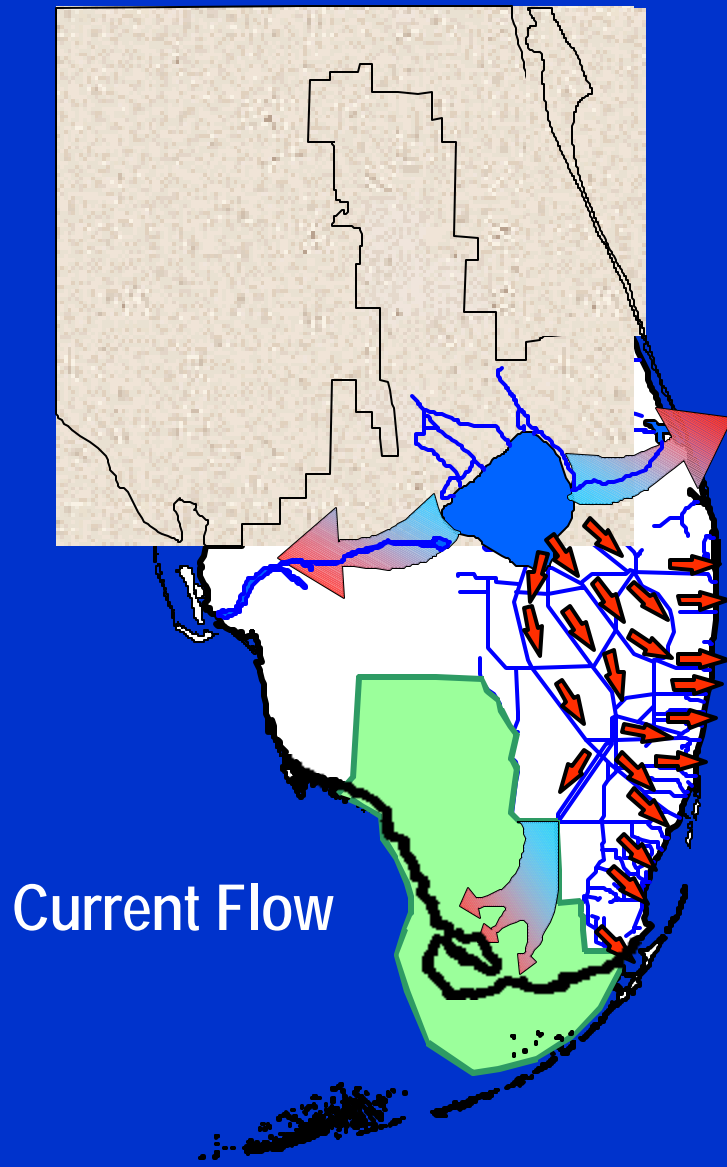


**Urban development and agricultural production have flourished. The environment began to flounder.**



# An Ecosystem in Trouble ...

*Why?*



# **The Comprehensive Everglades Restoration Plan**

- **1992**  
Corps of Engineers reevaluates the Central and Southern Florida Project.
- The South Florida Water Management District partnered with Corps
- **1996**  
Corps tasked to deliver Comprehensive Plan to Congress on July 1, 1999

*Rescuing an Endangered Ecosystem:  
The Plan to Restore America's  
Everglades*



*The Central and Southern Florida Project  
Comprehensive Review Study  
(The Restudy)*

*July 1999*

On July 1, 1999, the Secretary of the Army and the State of Florida presented to Congress the Central and Southern Florida Project ...

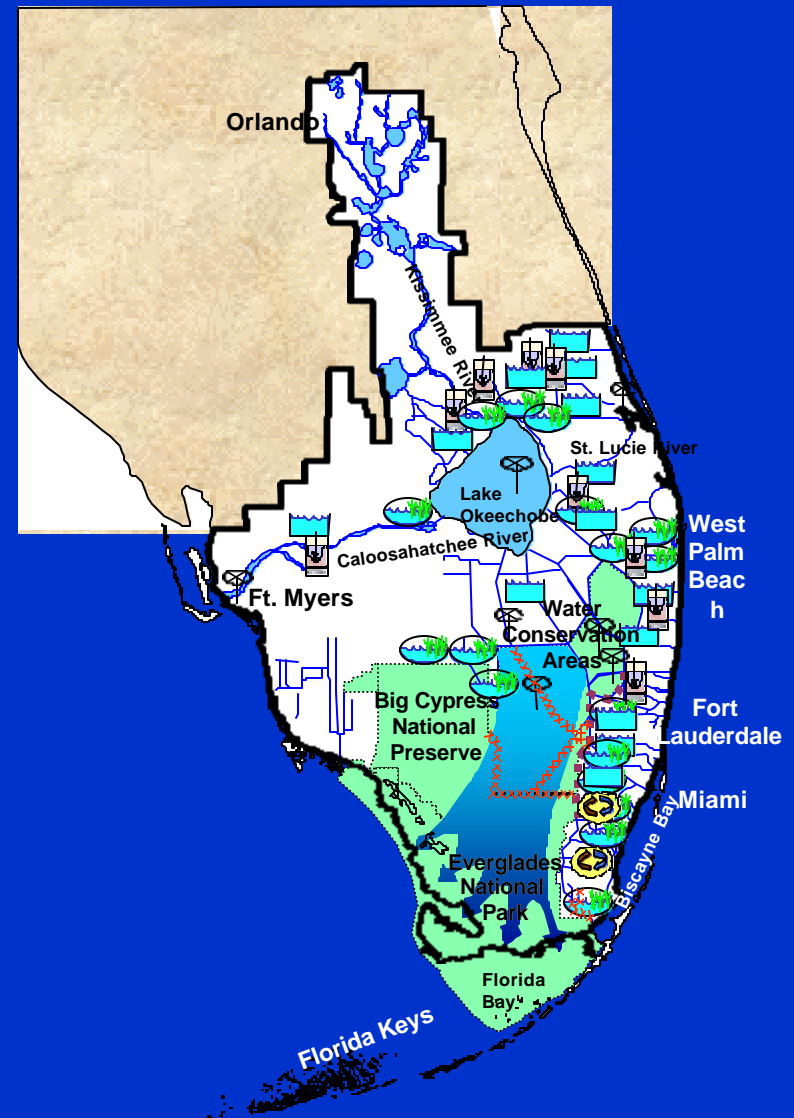
## Comprehensive Everglades Restoration Plan

*A series of environmental  
improvements over 25 years  
with an estimated cost of \$7.8  
billion*

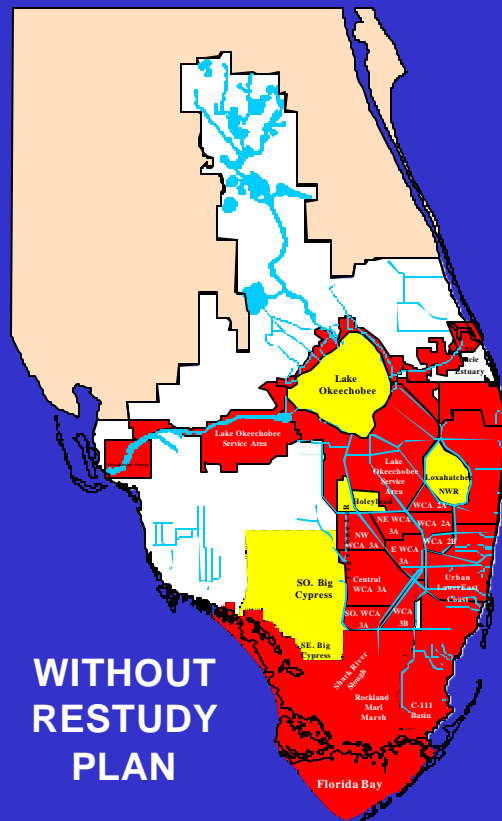


# Comprehensive Everglades Restoration Plan

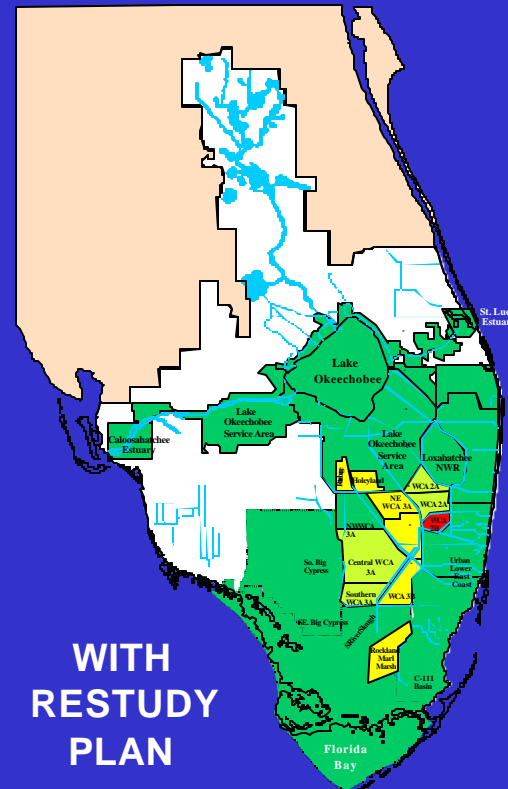
- 6 pilot projects
- 15 surface storage areas (~170,000 acres)
- 3 in-ground reservoirs (~11,000 acres)
- 330 aquifer storage and recovery wells
- 19 stormwater treatment areas (~36,000 acres)
- 2 wastewater reuse plants
- Removal of over 240 miles of canals, levees and structures
- Operational changes



# Future Ecosystem Conditions



**WITHOUT  
RE STUDY  
PLAN**



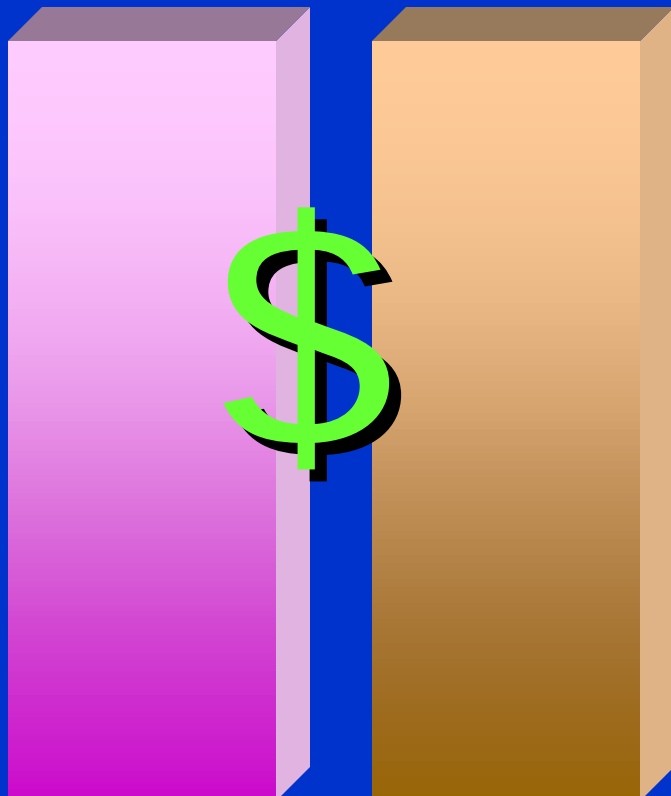
**WITH  
RE STUDY  
PLAN**

-  = Successful
-  = Marginal
-  = Recovery  
Unlikely

# How Much?....Who Pays?

**FEDERAL  
50%**

**STATE  
50%**



- \$7.8 billion over 25 years
- \$182 million each year operate & maintain

# ***The Next Step:*** **Congressional Authorization**



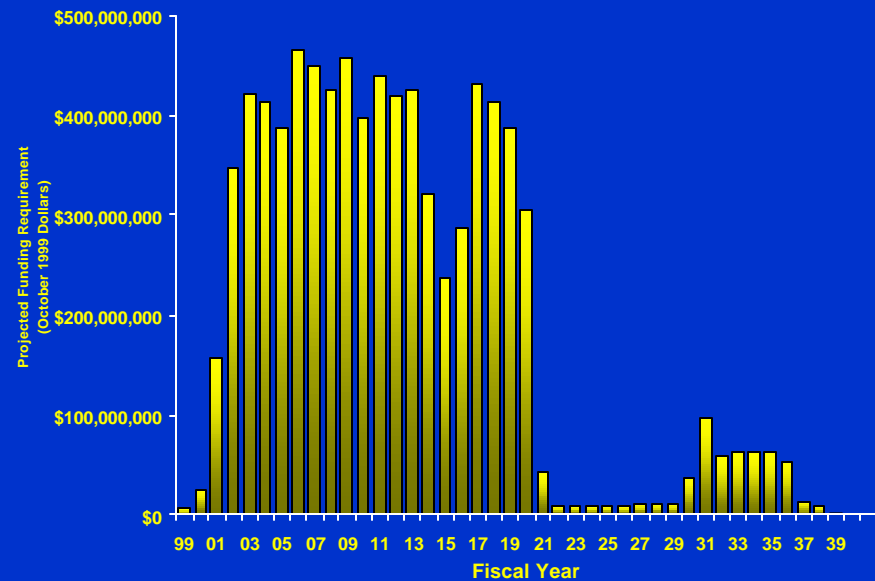
\* In the Water Resources Development Act (WRDA) of 2000

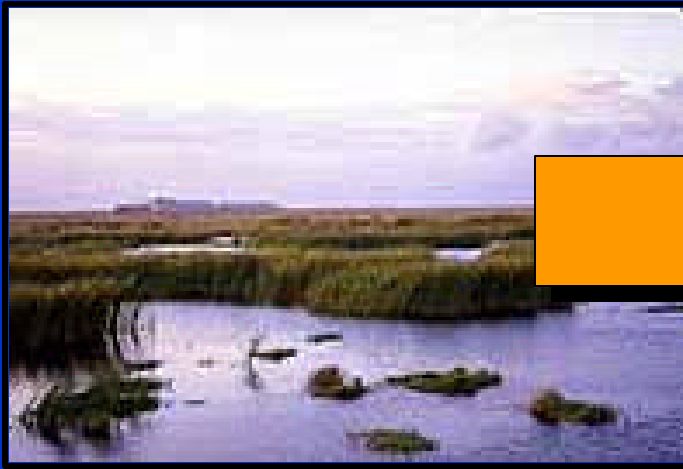


# IMPLEMENTING CERP

- Requires managing as an integrated program with linkages to other on-going projects
- Consists of 37 separate projects (including pilot projects)
- Some projects have multiple phases
- Also requires system-wide analyses and program level activities

## PROJECTED ANNUAL COST





## PILOT PROJECTS

Lake Okeechobee ASR	\$19,000,000 1/
Caloosahatchee River (C-43) Basin ASR	\$ 6,000,000
Site 1 Impoundment and ASR	\$ 9,000,000 1/
Lake Belt In-Ground Reservoir Technology	\$23,000,000
L-31N Seepage Management	\$10,000,000
Wastewater Reuse Technology	\$30,000,000
<b>TOTAL</b>	<b>\$97,000,000</b>

1/ Authorized in WRDA 1999 at a total cost of \$27,000,000



## PROJECTS FOR INITIAL AUTHORIZATION

C-44 Basin Storage Reservoir	\$112,562,000
Ever. Agric. Area Storage Reservoirs - Phase I	\$233,408,000
Site 1 Impoundment	\$ 38,535,000
WCAs 3A / 3B Levee Seepage Management	\$100,335,000
C-11 Impoundment & Stormwater Treatment Area	\$124,837,000
C-9 Impoundment & Stormwater Treatment Area	\$ 89,146,000
Taylor Creek / Nubbin Slough Storage and Treatment Area	\$104,027,000
Tamiami Trail Modifications and Fill Miami Canal (WCA 3)	\$ 26,946,000
North New River Improvements	\$ 77,087,000
C-111N Spreader Canal	\$ 94,035,000
Adaptive Assessment and Program Monitoring	\$100,000,000
TOTAL	\$1,100,918,000

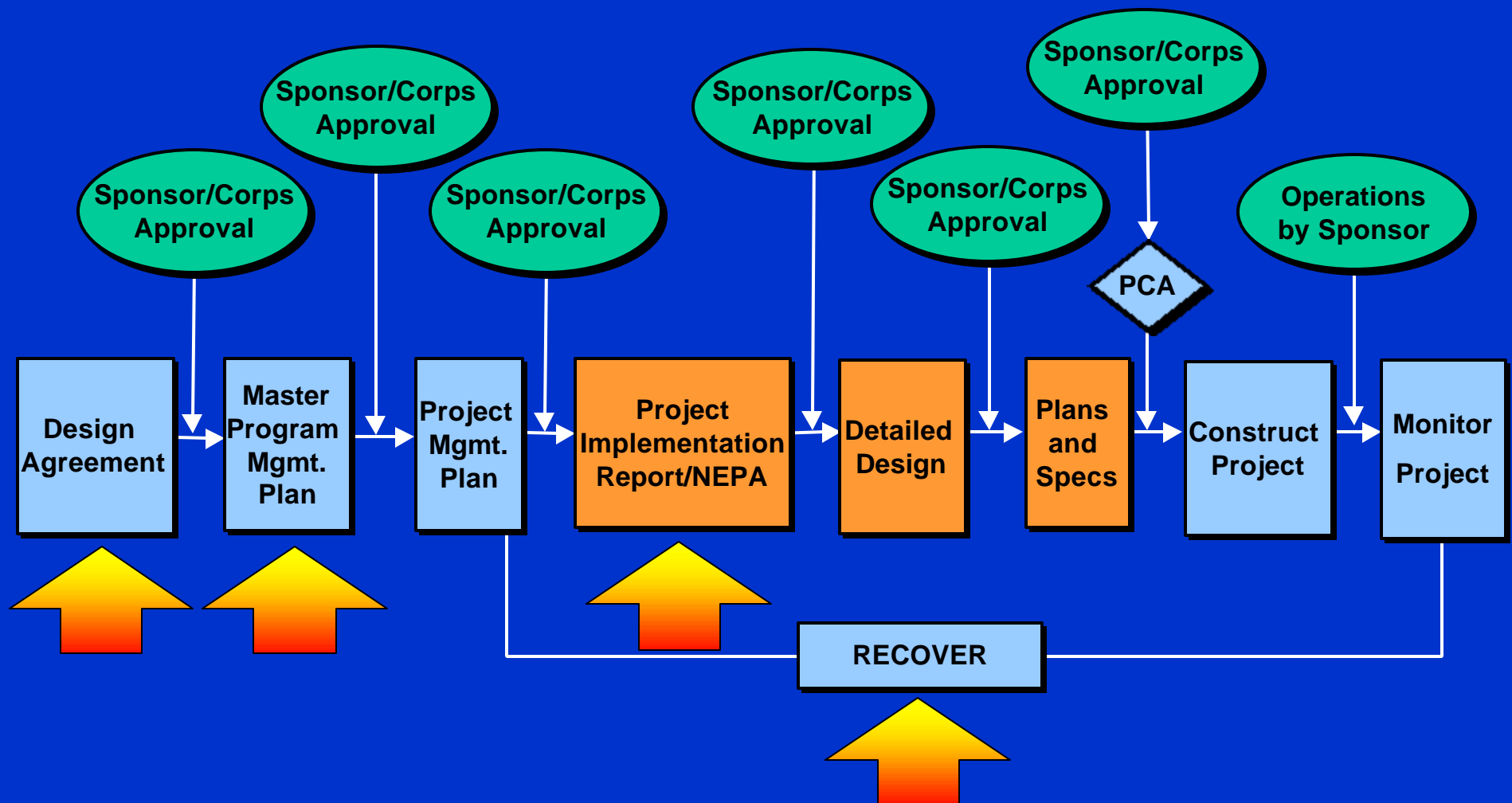


## PROGRAMMATIC AUTHORITY

- ✓ What is it? Similar to the authorization received in 1996 for the Everglades Ecosystem Restoration (Critical Projects)
- ✓ Why it is needed? To implement projects which would “produce independent, immediate, and substantial restoration, preservation and protection benefits,” and expedite some components of the Plan.
- ✓ Total Cost? \$209 million

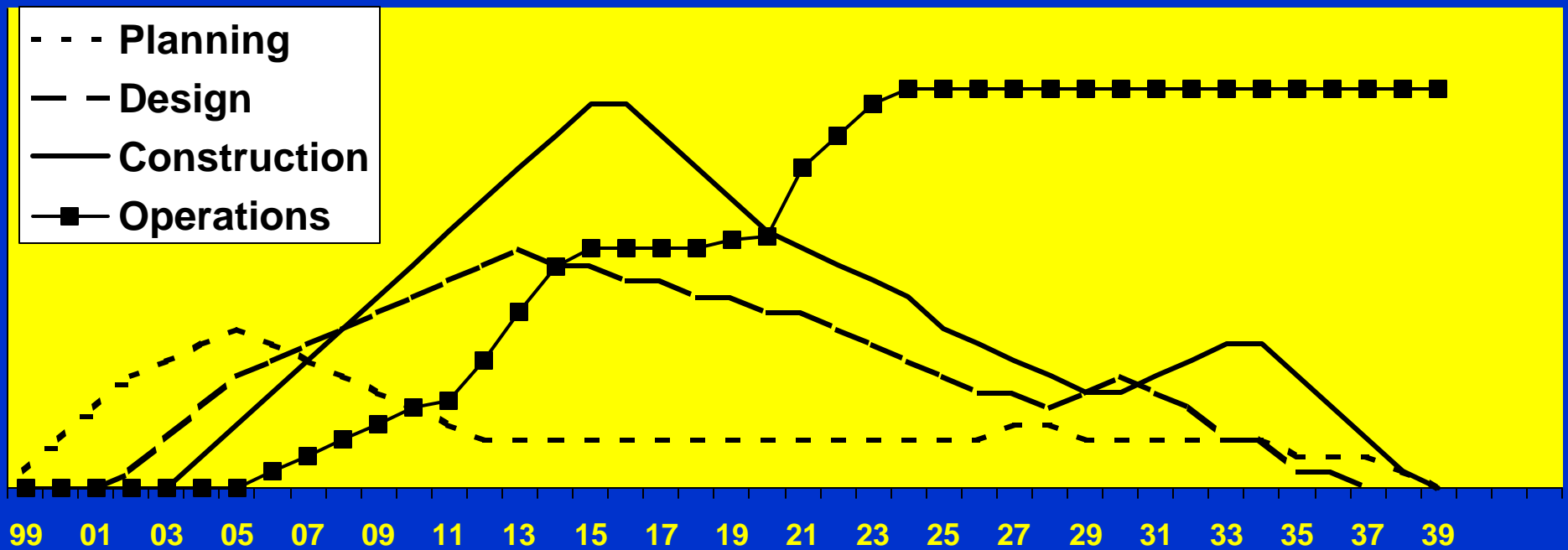


# CERP Development Process



# COMPREHENSIVE EVERGLADES RESTORATION PLAN

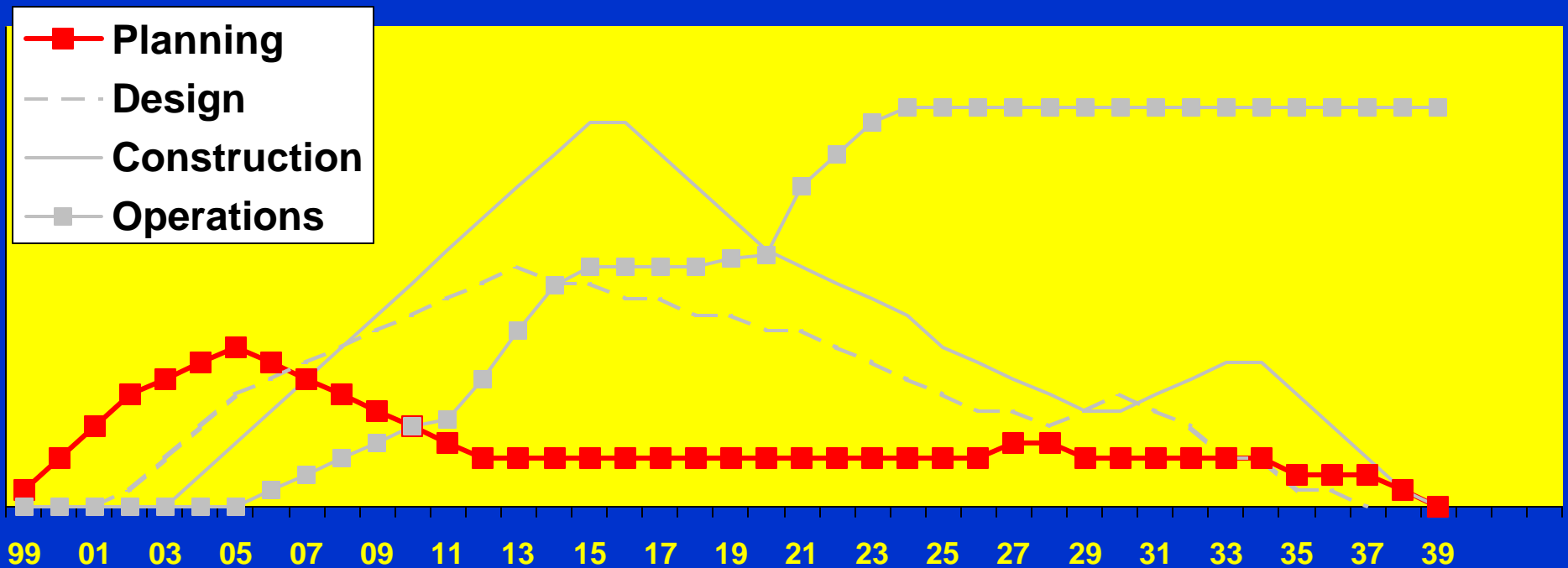
## Conceptual Lifecycle Phased Projections



# Skill Sets Required

# COMPREHENSIVE EVERGLADES RESTORATION PLAN

## Conceptual Project Implementation Report Skill Set Projections



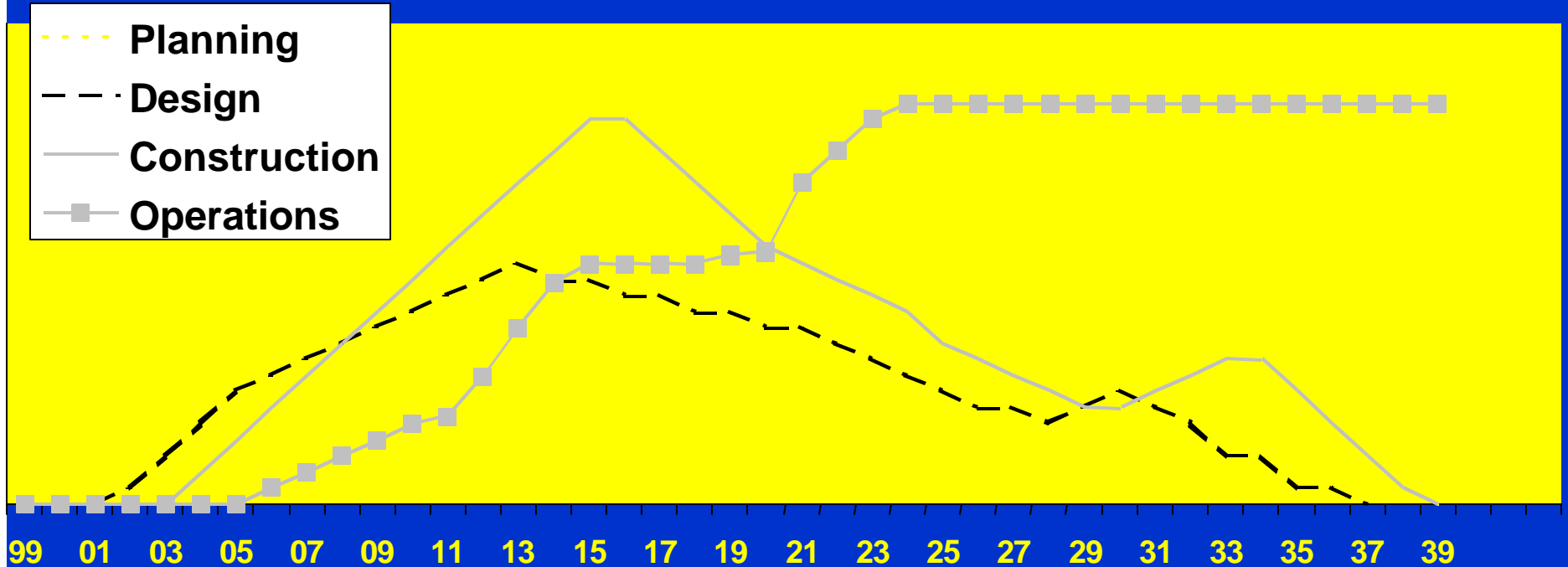
### Typical Project Implementation Report Phase Skill Sets

Water Resource Planners  
 Environmental Scientists & Engineers  
 Archeologists & Sociologists  
 Hydraulic Engineers & Geologists  
 Program and Project Managers  
 Real Estate Specialists & Attorneys  
 Landscape Architects & Surveyors  
 Information Technology Specialists

Economists & Cost Estimators  
 Ecologists & Biologists  
 Civil & Mechanical Engineers  
 Engineering Technicians  
 Public Involvement Specialists  
 Technical Writers & Editors  
 GIS/CADD/Computer Specialists

# COMPREHENSIVE EVERGLADES RESTORATION PLAN

## Conceptual Design Skill Set Projections



### Typical Design Phase Skill Sets

Structural & Mechanical Engineers

Geotechnical Engineers

Scientists & Planners

Cost Estimators

Engineering Technicians

Program and Project Managers

GIS/CADD/Computer Specialists

Information Technology Specialists

Civil & H&H Engineers

Geologists & Archeologists

Economists & Sociologists

Surveyors & Landscape Architects

Public Involvement Specialists

Real Estate Specialists & Attorneys

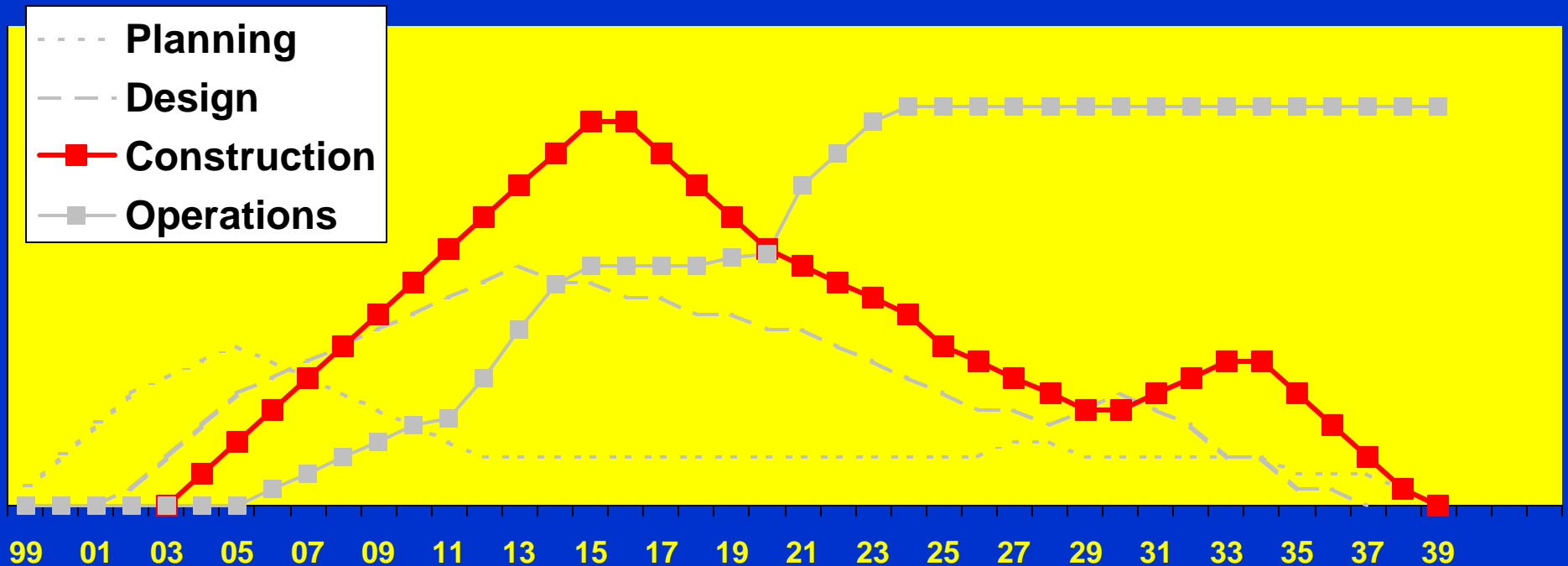
Contract Administrators

Ecologists & Biologists



# COMPREHENSIVE EVERGLADES RESTORATION PLAN

## Conceptual Construction Skill Set Projections



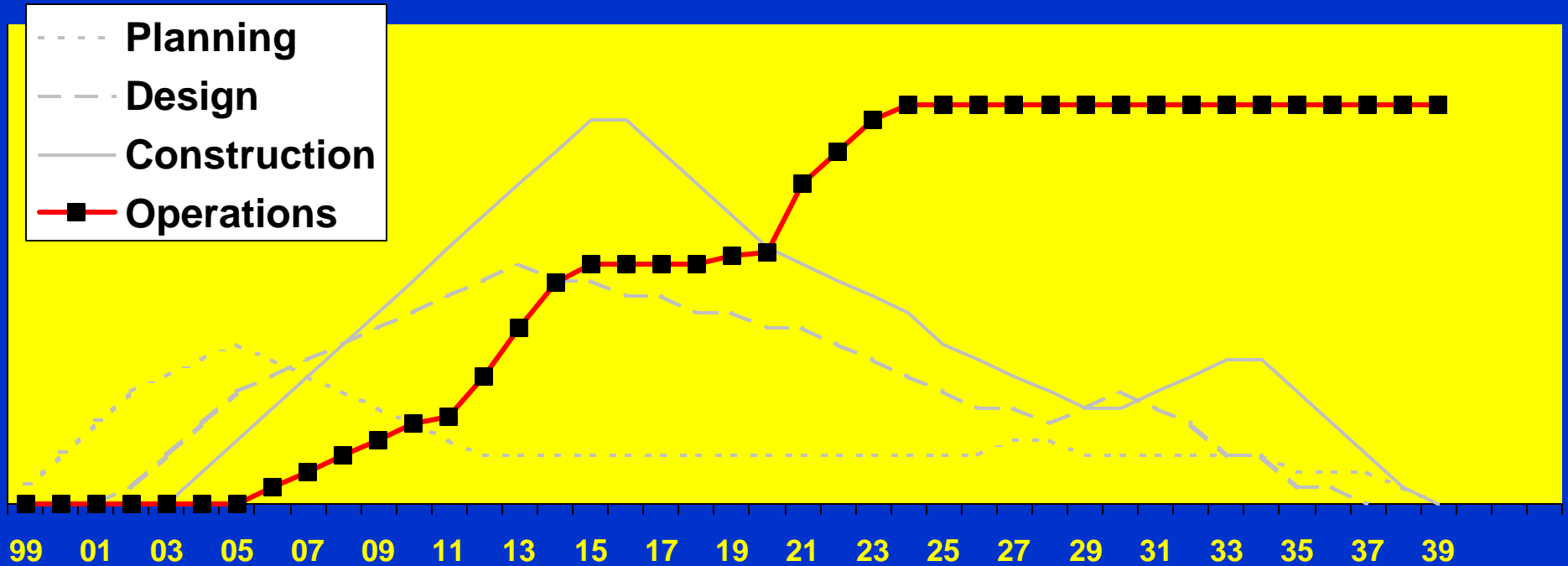
### Typical Construction Phase Skill Sets

Construction Managers  
 Engineering Technicians  
 Schedulers  
 Program and Project Managers  
 Construction Engineers  
 Quality Assurance Inspectors  
 Power Equipment Operators  
 Information Technology Specialists

Civil & Mechanical Engineers  
 Water Resource Operations  
 Contract Administrators  
 Environmental Engineers  
 Carpenters & Cement Masons  
 Iron Workers & Bricklayers  
 Pipe Fitters, Welders & Plumbers  
 Ecologists & Biologists

# COMPREHENSIVE EVERGLADES RESTORATION PLAN

## Conceptual Operations Skill Set Projections



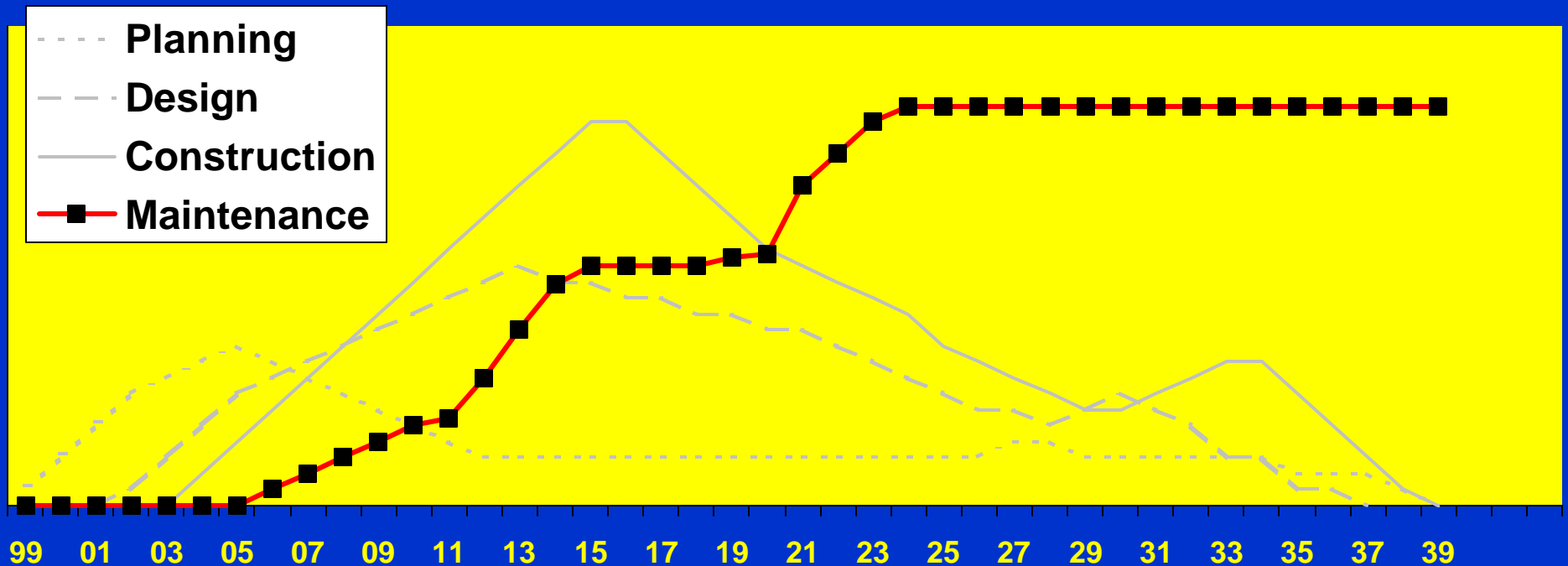
### Typical Operations Phase Skill Sets

Civil & Mechanical Engineers  
 Water Resource Operations Staff  
 Structure Maintenance Staff  
 Programmer/Analysts  
 Land Managers  
 Information Technology Specialists

Engineering Technicians  
 Control Center Operators  
 Pump Station Operators  
 Meteorologists  
 Administrative Personnel  
 Ecologists & Biologists

# COMPREHENSIVE EVERGLADES RESTORATION PLAN

## Conceptual Maintenance Skill Set Projections



### Typical Maintenance Phase Skill Sets

Vegetation Management Personnel  
 Facility Maintenance Mechanics  
 Hydraulic Maintenance Mechanics  
 Marine Mechanics  
 Flat/Slope Mowing Staff  
 Land Managers  
 Information Technology Specialists

Mechanical Harvesting Operators  
 Fleet Mechanics  
 Land Management Technicians  
 Tree Surgeons  
 Electrical/Mechanical Technicians  
 Administrative Personnel  
 Ecologists & Biologists



# What's Needed to Proceed?



- Project Authorizations
  - Federal
  - State
- Annual Appropriations
  - Federal
  - State
  - South Florida Water Management District



# South Florida Water Management District Contracting Opportunities



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**

**Your "link" to Contract Information**

**Procurement & Contracts:**  
[www.sfwmd.gov/caree/2\\_procure.html](http://www.sfwmd.gov/caree/2_procure.html)

**Overview:**  
[www.sfwmd.gov/org/mso/pro/3\\_procure.html](http://www.sfwmd.gov/org/mso/pro/3_procure.html)

**How to do Business with the District:**  
[www.sfwmd.gov/org/mso/pro/3\\_procure2.html](http://www.sfwmd.gov/org/mso/pro/3_procure2.html)

**How to get on the District Vendor Database:**  
[www.sfwmd.gov/org/mso/pro/3\\_procure3.html](http://www.sfwmd.gov/org/mso/pro/3_procure3.html)

**Current & Pending District Solicitations:**  
[www.sfwmd.gov/org/mso/pro/3\\_procure4.html](http://www.sfwmd.gov/org/mso/pro/3_procure4.html)

**Procurement & Contract information: 1-561-682-2813**

**sfwmd.gov**

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West Palm Beach, FL 33416-4680

# www.evergladesplan.org

Visit our  
web site

